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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,340	10/14/2003	Chunming Han	42P16539	7198
8791	7590	03/28/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			BUI, BRYAN	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/686,340

Applicant(s)

HAN ET AL.

Examiner

Bryan Bui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-18 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract is not within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

It is noted that the term “Zero-echo” is considered as “ the echo or unwanted reflection may begin near (e.g. just after) the time of pulse transmission, or near time zero”. (This definition is defined by applicant shows in pages 2-3 of the current application). The following rejections based on the meaning of “zero-echo” as set forth above.

5. Claims 1, 4-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Glass (US20020048265).

With respect to claim 1, Glass teaches Transceiver circuit and method including an echo canceller (modem) for transmitting and receiving communications over a transmission line (paragraphs 0002, 0006, 0019); generating a zero-echo canceling signal based on the transmitted pulse and receiving a zero-echo (paragraphs 0010, 0023); a subtraction circuit (subtractor) for adding or combining the zero-echo and the zero-echo canceling signal to reduce the received zero-echo (paragraphs 0023, 0027).

With respect to claims 4-6, Glass further teaches receiving a full-path reflection (figure 1, from block 8 to 12 to 16 (including voltage divider) to 22 to 10), wherein the zero-echo have been sufficiently cancelled or attenuated based on the adding or

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combining to allow the full-path reflection to be detected (0027, claim 5) and further teach a portion of the transmitted pulse also propagating via a short path (figure 1, from block 8 to 20 to 22) toward a receiver (10) as a the zero-echo; and wherein the adjusting comprising adjusting the value of a voltage bridge or adjusting the value of a variable resistor (paragraphs 0007-0008).

With respect to claims 7-13 and 14-16, Glass teaches Transceiver circuit with an echo canceller (modem) for transmitting and receiving communications over a transmission line; a processor coupled to the transceiver (paragraph 0006); and a zero-echo canceling system (echo canceller, voltage divider, subtraction circuit) adapted to at least *partially* (figure 1, either in short path or in full path) cancel a received zero-echo canceling signal based on the transmitted pulse (paragraphs 0006, 0007, 0019, 0023) by generating a zero-echo canceling signal based on the transmitted pulse (paragraphs 0010, 0023). Further, Glass teaches a combination circuit coupled to the voltage divider and the zero-echo canceller, the combining circuit adapted to combine a zero-echo received from the zero-echo canceller (paragraphs 0007, 0023, 0027); combination circuit comprises an adder, a subtraction circuit, a variable voltage divider with a variable resistor (paragraphs 0007, 0008, 0011).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glass (US20020048265) in view of Rahamim et al (US 20020097863).

With respect to claims 17-18, Glass teaches the features of the claimed invention as set in the rejections above, except mention wherein the modem comprises a cable modem/ a DSL modem, even-though a cable modem/DSL (Digital Subscriber Line) modem is well-known in the communication system (such in telephone line). Rahamim et al discloses an echo cancellation circuit coupled to transmitter and receiver to reduce the echo (paragraph 0040) and the function of DSL signal applicable in the transmission line (paragraph 0002) indicates a customer premise equipment transceiver located in a telecommunications comprise a cable modem/a DSL modem (paragraph 0035). It would have been obvious to one of ordinary skill in the art to modify the modem of transceiver circuit with an echo canceller of Glass to include the a cable modem/a DSL modem in the technique such disclosed in Rahamim et al (paragraph 0035) to access the high rate communications.

***Allowable Subject Matter***

8. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In combination, the prior art does not disclose or suggest calculating an error signal as a difference between the zero-echo and the zero-echo canceling signal.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 571-272-2271. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BB

3/22/05

**BRYAN BUI  
PRIMARY EXAMINER**

